



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/019,902	07/02/2002	Nikolai Vladimirovich Bovin	9286-7	7167

20792 7590 09/06/2006

MYERS BIGEL SIBLEY & SAJOVEC
PO BOX 37428
RALEIGH, NC 27627

EXAMINER

MAIER, LEIGH C

ART UNIT PAPER NUMBER

1623

DATE MAILED: 09/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/019,902

Applicant(s)

BOVIN ET AL.

Examiner

Leigh C. Maier

Art Unit

1623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,9-12,14-16,18,20,23,27 and 28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,10-12,14-16,18,20,23,27 and 28 is/are rejected.
- 7) ☒ Claim(s) 6 and 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Status of the Claims***

Claims 1, 10, 12, 15, 18, 23, 27, and 28 have been amended. Claims 1-6, 9-12, 14-16, 18, 20, 23, 27, and 28 are pending. Any rejection or objection not specifically repeated has been withdrawn. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Applicant asserts the entitlement to the consideration of additional species with respect to variable "R" and variable "X" upon allowance of the species wherein "R" is a saccharide, and "X" is carbon. This is noted. However, at this time the examination remains limited to the original species election.

Claim Rejections - 35 USC § 102

Claims 1-5, 10-12, 14-16, 23, 27 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Unverzagt et al (Carbohydr. Res., 1994).

Upon reconsideration of the art of record, it is noted that Unverzagt discloses multivalent glycopeptides consistent in structure with formula I. See Table 1, compounds 3a, b, c. It is noted that the unglycosylated peptide precursor is also consistent with the formula recited in claim 23, which requires no non-hydrogen R-groups. The reference is silent regarding any aggregation of these compounds. However, the compounds are consistent in structure with the recited structural formula and would necessarily have the same physical properties. Since the Office does not have the facilities for preparing the claimed materials and comparing them with prior art inventions,

Art Unit: 1623

the burden is on Applicant to show a novel or unobvious difference between the claimed product and the product of the prior art. See *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977) and *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980).

Regarding claims 14 and 15, these claims simply recite manipulations, such as pH change, that occur in the normal synthesis and work-up of synthetic compounds.

Claim Rejections - 35 USC § 103

Claims 1-5, 10-12, 14-16, 18, 20, 23, 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Unverzagt et al (Carbohydr. Res., 1994).

Unverzagt teaches as set forth above. The reference further teaches that these compounds inhibit the binding of influenza virus to cells. The reference specifically suggests but does not disclose treatment of influenza.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to administer the disclosed compounds for the treatment of influenza. One of ordinary skill would reasonably expect success in using the compounds in this method because the reference had taught that the compounds inhibit binding of the influenza virus.

Claims 1-5, 10-12, 14-16, 18, 20, 23, 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Unverzagt et al (Carbohydr. Res., 1994) in view of Mammen et al (Angew. Chem. Int. Ed., 1998).

Unverzagt teaches as set forth above. The reference does not teach the full range of saccharide "R" groups or the treatment of the full range of diseases recited.

Art Unit: 1623

The use of multivalent saccharide compounds for the treatment of a variety of diseases is known in the art, as reviewed by Mammen. See particularly the tables in the reference.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the compounds of Unverzagt by the substitution of the saccharide moieties for others known to be useful in the art, as discussed in Mammen. It would be further obvious to use these compounds for the treatment of a variety of diseases, such as those discussed in Mammen. The artisan would reasonably expect success in such modifications of Unverzagt based on the state of the art, as discussed in Mammen.

Allowable Subject Matter

Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 6 is also objected to as being dependent upon a rejected base claim to the extent that "X" and "R" are currently limited as discussed above.

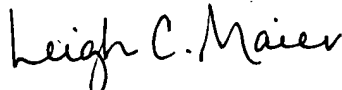
Art Unit: 1623

Examiner's hours, phone & fax numbers

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leigh Maier whose telephone number is (571) 272-0656. The examiner can normally be reached on Tuesday, Thursday, and Friday 7:00 to 3:30 (ET).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Anna Jiang (571) 272-0627, may be contacted. The fax number for Group 1600, Art Unit 1623 is (571) 273-0627.

Visit the U.S. PTO's site on the World Wide Web at <http://www.uspto.gov>. This site contains lots of valuable information including the latest PTO fees, downloadable forms, basic search capabilities and much more.



Leigh C. Maier
Primary Examiner
September 1, 2006